

PROJECT SUMMARY

Olympic Pipe Line Company (OPL), based in Renton, Washington, proposes to construct a 231-mile underground petroleum products pipeline from Woodinville to Pasco, Washington. The Cross Cascade Pipeline will be an extension of OPL's existing underground pipeline in Western Washington, and is intended to reduce shipments of petroleum products by water and tanker truck throughout the state.

The proposed pipeline corridor generally follows existing rights-of-way where power lines, trails, and roads are already located. By siting the pipeline in existing rights-of-way, the need to disturb undeveloped areas is greatly minimized.

The proposed pipeline will transport gasoline, diesel, and jet fuel refined at western Washington refineries to eastern Washington. Much of this same fuel is already being transported to eastern Washington, but now must travel by ocean to Portland and river barges up the Columbia River, or tanker trucks traveling Interstate 90 across the Cascade Mountains. These water and truck shipments have increased by almost double over the last six years, from an average of 29,818 barrels per day in 1991 to 52,205 barrels per day in 1996, and are expected to continue to increase unless a pipeline is built. The construction of the Cross Cascade Pipeline will not cause an increase in crude oil shipments to western Washington refineries.

Authority to construct the proposed pipeline would be granted by the Governor of the State of Washington, after consideration of this application for Site Certification Agreement by the State's Energy Facility Site Evaluation Council (EFSEC). EFSEC was established in 1970 for the purposes of siting energy facilities, including crude or refined petroleum products pipelines larger than 6 inches in diameter, and a length of at least 15 miles. The law also provides for EFSEC to continue its oversight and regulatory powers once such energy facilities are constructed.

OLYMPIC PIPE LINE COMPANY

For 30 years, OPL has operated 400 miles of underground petroleum product pipelines in western Washington that were constructed prior to the creation of EFSEC. This existing pipeline system begins at the four oil refineries in Skagit and Whatcom Counties, transports refined petroleum products south to Seattle, then continues to Portland, Oregon. The OPL system consists of two parallel lines, a 16-inch and a 20-inch, starting near the refineries and running south to Renton. After delivering fuel to Seattle and Sea-Tac International Airport, the two lines combine into one 14-inch line that proceeds south to Portland. Virtually all of the gasoline, diesel, and jet fuel consumed in western Washington is transported by OPL. Today, OPL transports over 4 billion gallons a year of refined fuels through its western Washington system.

OPL was established in 1961 as a stock corporation. Its owners are Texaco Trading and Transportation

Inc (TTTI) (37.5 percent ownership), Atlantic Richfield Company (37.5 percent ownership), and GATX Terminals Corporation (25 percent ownership). Local management and operation of OPL is conducted from the company's Renton headquarters. The Renton office is also where the company's state-of-the-art control center is located. Operators working at this computerized center monitor and control the operation of OPL's 400-mile pipeline system 24 hours a day. Additional maintenance and operations personnel are stationed at various points along the pipeline system.

WHY A CROSS CASCADE LINE IS NEEDED

A Cross Cascade petroleum products pipeline is necessary to meet the ever-increasing demand for product in eastern Washington. The project is being proposed at the request of OPL's customers, the shippers who transport product from the western Washington refineries to markets in central and eastern Washington. Historically, the fuel needs of eastern Washington were served by two pipelines from the east, by truck traffic across the Cascade Mountains, and by barge traffic on the Columbia River. The first pipeline, the Yellowstone Pipeline, is owned by Conoco and Exxon and served by refineries in Billings, Montana. The Yellowstone line transports refined fuels to a distribution facility at Spokane, where a smaller line proceeds to Moses Lake. The second pipeline is the Chevron Pipeline, owned by Chevron and served by refineries in Salt Lake City, Utah. The Chevron line serves Boise, Idaho and proceeds to a distribution terminal at Pasco with a lateral line to Spokane. Production at the Salt Lake City, Utah and Billings, Montana refineries is not keeping pace with consumer demand.

Currently, product from the Puget Sound refineries to eastern Washington is transported in one of three ways:

1. By existing OPL pipelines to Portland, where it is transferred onto river barges for shipment up the Columbia River to Pasco;
2. By ocean barge or oil tanker from north Puget Sound through the Strait of Juan de Fuca, and then along the Washington coast to Portland, where it is transferred onto river barges for shipment up the Columbia River to Pasco; or
3. By tanker truck across the Cascade Mountain passes.

Increasing amounts of fuel that formerly were shipped via pipeline to eastern Washington now remain in Salt Lake City and Billings instead. To serve eastern Washington, shippers have had to turn more and more frequently to western Washington-refined fuel that is transported by tanker trucks and Columbia River barges. Currently, it is estimated that approximately 50 to 60 fuel-carrying tanker trucks are crossing the Cascade Mountains every day. Tanker trucks crossing the Cascades generally obtain fuel from Seattle's Harbor Island distribution facility and transport it to points in central and eastern Washington.

Table S-1 shows the volume of product transported into central and eastern Washington from 1987 to 1996 based on data from Energy Analysts International, Inc. (EAI):

TABLE S-1
VOLUME OF PRODUCT TRANSPORTED INTO CENTRAL AND EASTERN WASHINGTON
(Average Barrels Per Day)

Year	Yellowstone Pipeline	Chevron Pipeline	Trucked	Barged	Total
1987	24,534	13,468	11,587	25,434	75,023
1988	26,895	16,458	11,587	18,891	73,831
1989	24,600	15,742	8,950	23,255	72,547
1990	29,183	13,361	9,213	23,199	74,956
1991	29,583	14,899	9,213	20,605	74,300
1992	28,083	12,300	13,500	24,056	77,939
1993	26,324	11,199	11,300	32,396	81,219
1994	27,879	9,702	8,200	36,904	82,685
1995	22,856	7,336	8,200	43,449	81,841
1996	22,905	6,401	13,800	38,405	81,511
Yearly Average	26,284	12,087	10,555	28,659	

In 1996, approximately 38 thousand barrels of fuel a day was transported by either seagoing barge or pipeline to Portland, Oregon where the fuel is transferred to barges and taken upriver to Pasco. As shown on Table S-1, this amount has varied by year, but has averaged over 28,659 for 1987 - 1996, and averaged over 32,600 barrels per day for 1991 - 1996.

With increasing need for fuel in eastern Washington, the demand for transporting fuel to Portland has grown dramatically to the point where OPL's north-south line from Renton to Portland is at carrying capacity.

The Cross Cascade Pipeline will greatly reduce the need to ship fuel by barge and tanker truck. OPL proposes to construct the Cross Cascade Pipeline because it provides three major advantages over barges and trucks: 1) greater reliability; 2) greater cost-effectiveness; 3) fewer environmental risks.

Without the proposed pipeline, OPL would continue to operate its existing pipeline system at its current levels, and at rates which provide economic returns under tariffs approved by the Federal Energy

Regulatory Commission (FERC) and the Washington Utilities and Transportation Commission (WUTC). The adverse impact resulting from the continuing and increasing use of barges on the Columbia River and tanker trucks on interstate highways across the Cascade Mountains to ship product to eastern Washington will not be avoided.

The existing OPL pipeline system reached its capacity for shipments from the refineries near Anacortes to Seattle and Vancouver/Portland in 1995; therefore, without the Cross Cascade Pipeline, all future growth in eastern Washington demand would have to be transported by barge and truck.

In addition to the inability to serve eastern Washington, not constructing the proposed Cross Cascade Pipeline will also have an impact on the ability of OPL to serve Seattle, Tacoma, and Vancouver/Portland.

Because of the lack of capacity of the existing OPL pipeline system, OPL has had to place restrictions on the existing operation by prorating capacity among shippers. This has two particularly significant impacts: first, the number of ocean barges and tanker movements in Puget Sound and the Strait of Juan de Fuca will continue to increase; and second, the ability to serve the airlines at Sea-Tac International Airport may be seriously affected. Because the existing OPL pipeline is the only means for getting jet fuel to the airport and there are no alternative delivery systems in place at the airport, proration would have a particularly adverse impact on air transportation.

In summary, not constructing the proposed pipeline will pose the risk of a significant, adverse impact on the environment, because it will result in an increased volume of product being transported by ocean barge and tankers in Puget Sound and the Strait of Juan de Fuca, by river barges on the Columbia River, and by tanker truck across the Cascade Mountain passes.

SUMMARY OF CROSS CASCADE PIPELINE PROPOSAL

The proposed Cross Cascade Pipeline project includes a 231-mile underground pipeline that will connect to OPL's existing north-south lines, six pump stations along the route, and a storage and truck distribution terminal at the town of Kittitas. At its termination, the pipeline will include a delivery facility that will connect to the existing Northwest Terminalling facility at Pasco.

The Cross Cascade Pipeline will begin near the communities of Thrashers Corner and Turners Corner in Snohomish County, where it will connect with OPL's existing pipeline. A pump station (Thrasher Station) will be constructed at the connection point. At its origin point, the new pipeline will be within an existing Bonneville Power Administration transmission line corridor.

The new pipeline will proceed east, cross the Snoqualmie River on an existing bridge, then turn southeast following existing rights-of-way of transmission lines, trails and roads. At North Bend in King County, a second pump station (North Bend Station) will be constructed. The new line will cross Snoqualmie Pass using the old Chicago, Milwaukee-St. Paul Railroad tunnel, and continue southeast along existing rights-

of-way.

Near the Indian John Rest Area, the pipeline will cross under I-90, then cross the Yakima River following existing transmission line rights-of-way north of Ellensburg. It then will turn south to the community of Kittitas.

At Kittitas, a storage and distribution facility will be constructed on a parcel of land adjacent to I-90 where two gasoline service stations are located. The Kittitas terminal will provide both in-transit storage for the pipeline and inventory storage to support tanker trucks making deliveries to central Washington. The Kittitas Terminal will consist of ten storage tanks, plus the necessary valves and piping, all surrounded by a containment basin. A pump station will provide pressure to continue moving product through the line for deliveries to Pasco.

The Kittitas Terminal will also include a truck loading and unloading area consisting of 2 major product loading bays, 1 utility loading and unloading bay, loading and unloading pumps, an oil-water separator, and a vapor recovery unit. The entire facility will have an integrated monitoring and fire safety/protection system monitored both at Kittitas and the Renton Control Center.

The pipeline will be 14 inches in diameter from its point of origin to the Kittitas Terminal. From Kittitas to Pasco, the pipeline will be 12 inches in diameter.

From Kittitas, the pipeline will proceed southeast and easterly on State Park land, crossing under I-90 near the town of Vantage. The route will turn south, parallel to the west side of the Columbia River, continuing on State Park land. It will cross the Columbia River by directional drilling just downstream of Wanapum Dam. On the east side of the Columbia, the line will continue east, then near Othello head south to Pasco.

Initially, the new pipeline will require the construction of two pump stations in western Washington, and one pump station in eastern Washington. The two pump stations in western Washington will be located at the point of origin, Thrasher Corner in Snohomish County, and at North Bend in King County. The pump station in eastern Washington will be located at the Kittitas Terminal.

Additional pump stations are planned for locations approximately two miles east of Lake Keechelus in Kittitas County (Stampede Station), east of the Wanapum Dam in Grant County (Beverly-Burke Station) and just south of Othello in Adams County (Othello Station). These three pump stations will not be constructed until fuel volumes increase in the future, estimated to be at least five years following startup of the pipeline.

The underground pipeline will cross six counties: Snohomish, King, Kittitas, Grant, Adams, and Franklin. It also will cross four cities: Snoqualmie, North Bend, Kittitas, and Pasco.

PIPELINE SAFETY

OPL Spill Response and Prevention

A primary means by which a pipeline's impacts on the environment can be minimized is through comprehensive spill prevention and response efforts. OPL has operated 400 miles of underground pipeline in western Washington for the last 30 years, and has established an excellent record in terms of its spill history.

OPL moves about 4 billion gallons of refined petroleum products every year. Of the billions of gallons transported, less than one gallon in a million has been released since OPL began its operations in 1965.

OPL Technology and Safety Practices Reduce Threat of Spills

There are several ways in which OPL has reduced the risks of spills for its existing pipeline system. These same methods will be used with the Cross Cascade Pipeline, and include:

State-of-the-Art Spill Detection Technology

OPL's pipeline is continuously monitored by trained operators using advanced technology called Supervisory Control and Data Acquisition (SCADA)--a system originally developed for use by the National Aeronautics and Space Administration (NASA). The SCADA system allows operators to detect anomalies as they monitor the flow of fuel through the pipeline. Operators at the Renton, Washington control center can shut down the entire pipeline or parts of it at any time from the control center. OPL will use the same advanced computer technology to monitor the new Cross Cascade Pipeline.

State-of-the-Art Cathodic Protection

Preventing external corrosion is one important factor in ensuring pipeline safety. Generally, pipelines built after 1940 have fewer corrosion problems, because modern pipe coatings are more effective in preventing corrosion. In addition to using modern technology in constructing the pipeline, OPL impresses a small electrical charge called cathodic protection on its pipeline to prevent corrosion. OPL also uses a "smart pig", a circular, computerized sensing device that is sent through the pipeline and can detect corrosion, dents, or other defects of the pipeline wall so that repairs can be made before a leak can develop.

Modern Pipeline Construction Techniques

Modern methods of pipeline construction call for high-grade steel pipe that is high in "ductility," or the ability to flex. In addition, acetylene welds are no longer used. Today's welds are full penetration arc welds, high in ductility, made to be stronger than the pipe itself, and are coated with the same protective

coating as the pipe itself. One hundred percent of the welds on the new pipeline will be x-rayed.

Warning Signs, Inspections

OPL marks its pipeline with warning signs that include a 24-hour a day toll-free phone number to report problems. In addition, OPL follows U.S. Department of Transportation (USDOT) regulations requiring the right-of-way be inspected a minimum of every two weeks. This is normally accomplished through aerial observation.

Trained Personnel

OPL personnel undergo an internal certification process. A safety meeting is held once a month to discuss issues specified by Occupational Safety and Health Administration (OSHA) and the USDOT. Employees participate in continual training and education, and employee compensation is tied to continuing training. All OPL field employees and most office employees are trained and certified in hazardous materials operations. In cooperation with state and federal agencies, OPL conducts frequent spill drills where personnel practice procedures that will be implemented in the event of an accidental release of fuel, either on the ground or in water.

Pipelines Rated Safest of Transportation Methods

One of the most extensive studies of pipeline safety in the United States has been conducted by the California State Fire Marshall's office. California has over 7,800 miles of underground petroleum pipelines. The California Fire Marshall reports that pipeline spills have shown a 7 percent decline in California from 1980 to 1990 (California State Fire Marshal, Hazardous Liquid Pipeline Risk Assessment, March, 1993).

Shippers in Washington State use a variety of methods in transporting refined petroleum products. If the Cross Cascade Pipeline is built, the state as a whole will see a decrease in petroleum products shipped by barge and tanker truck, and an increase in shipments by pipeline. This shift in transportation modes will increase petroleum product transportation safety in Washington.

"It is important to put the relative safety of pipelines versus other modes of transportation into perspective," says the California Fire Marshal report. The report uses statistics obtained from the United States Department of Transportation, Research and Special Programs Administration's 1990 National Transportation Statistics - Annual Report. Looking at these transportation statistics, pipelines are rated number one in safety. Marine transportation is ranked second in safety behind pipelines. Rail transportation is rated third, and highway transportation is fourth.

In the report, the California Fire Marshal cautions that regulatory policies that could result in products

being diverted from pipelines to other modes of transportation should be carefully considered. "Since these other modes generally expose the public to a higher risk than pipelines, any such diversion may actually decrease overall transportation safety," says the report.

ENVIRONMENTAL IMPACTS TO BE MINIMIZED

While the proposed Cross Cascade Pipeline will cross under many types of environments, its environmental impacts are minimized for four key reasons:

- C **Underground Location:** Because the pipeline will be located underground, the impacts on most land uses will be temporary.
- C **Short Construction Period:** A pipeline is constructed in sections, thereby minimizing the time during which any particular area is under construction. For the most sensitive sections along the pipeline route--such as stream crossings--it is expected that the construction process will be completed within 48 hours.
- C **Sensitive Areas Avoided:** The proposed pipeline route has been adjusted to take into consideration sensitive areas and to avoid them as much as possible. In its 231-mile length, over 99 percent of the corridor has been routed to avoid wetlands. The 17 acres that cannot be avoided will be restored and additional wetland enhancements will be made to mitigate for the temporary impacts. In addition, by placing the pipeline in existing right-of-way corridors, pipeline impacts are generally confined to areas that already have been disturbed.
- C **Rivers and Streams:** The proposed pipeline will cross 293 waterways, most of which are small streams, many of them intermittent and including 61 canals or irrigation ditches. Wherever practicable, existing bridges will be used to cross wetlands and streams.

Directional drilling will be used for crossing the Columbia River. Directional drilling is a method by which the pipeline is buried far beneath the river bottom. By using this method, neither the drill, nor the pipe itself, comes into contact with the river water.

Other major river crossings will use an open-cut dry method which diverts the water flow in sections of the river for placement of pipe sections. This method can be accomplished in a very short period of time and eliminates the need for a large drilling equipment staging area.

The precautions OPL will take to prevent spills have been described above, as well as the relative safety of pipelines versus other forms of transportation. What follows is a discussion of potential environmental impacts and what will be done to minimize the impacts.

- C **Full-time Environmental Inspector:** In order to minimize impacts during construction--and to ensure that environmental protection is given a high priority--OPL will have a full-time environmental compliance coordinator during project construction. This coordinator will oversee qualified personnel working with construction crews to ensure environmental "best management practices" are carried out. In addition, OPL will fund a full-time environmental inspector position that will be supervised by and report to the Energy Facility Site Evaluation Council. This inspector will have stop-work authority.

- C **No Increase of Slope Failure in Steep Terrain:** The majority of the pipeline route is in existing corridors where the soils and topography have been previously disturbed. Even though the pipeline crosses steep terrain, no increase in slope failure is expected. This is primarily due to the fact that a pipeline requires minimal intrusion, limited to about 4 to 6 feet of depth.

- C **No Identified Earthquake Faults Crossed:** The pipeline will not cross any mapped active earthquake faults. There are two active earthquake faults near the pipeline route, one near the Yakima River crossing and one in the Saddle Mountains. However, the pipeline route is far enough from these active faults that their presence poses minimal concern.

- C **No Long-term, Significant Air Pollution Emissions:** During construction, there will be equipment exhaust and wind-blown dust, but they will be localized and short-term. Dust during construction will be controlled through watering the right-of-way and applying gravel to access roads where traffic volumes are high.

Net increases in VOC and benzene emissions at the Kittitas storage and distribution terminal will not exceed air pollutant standards, and therefore air quality impacts are considered low. The expected levels of volatile organic compounds from the pump stations are expected to be insignificant.

- C **Little or No Water Quality Impacts:** Impacts on surface and ground water quality are expected to be low because erosion control measures, including Best Management Practices, will be employed.

During the hydrostatic testing of the pipeline, approximately 1.5 million gallons of water will be used. Following hydrostatic testing, an evaluation of the water will be conducted to ensure that it meets state water quality standards. The water will be indirectly discharged to waters of the state after ensuring its quality.

Water for hydrostatic testing will be obtained from either the Snoqualmie River or Alderwood Water District, City of North Bend, the Cascade Irrigation Canal, and the Wahluke Branch Canal. The volume of water required is of low enough quantity to have little or no effect on these water supplies.

- C **Confining Pipeline to Existing Corridors Minimizes Impact on Wildlife and Plants:** The pipeline will use existing right-of-way corridors whenever possible. These corridors already have experienced significant alterations to vegetation and habitat. Edge and corridor habitat have been created over the years, meaning that wildlife have adjusted to altered habitat conditions.

Any habitat disruption will occur on a temporary basis during construction. Concentrated construction activity will take place for about a two-week period in any given location. Disturbed areas will be restored.

Construction of the pipeline in some limited areas will require the minimal cutting of trees. No old-growth trees have been identified in areas needing clearing. New rights-of-way will be created in areas where the proposed route must cross from one existing right-of-way to another. It will also be created where power lines in the existing right-of-way are strung from one slope to another, where vegetation below the power line is currently relatively undisturbed.

The normal corridor needed during construction will be 60 feet wide. When new right-of-way is created in sensitive areas, special construction techniques will be used to restrict it to the smallest area possible.

Following construction, a 30-foot-wide corridor is normally desired for long-term right-of-way maintenance. No access roads will be constructed through sensitive wetland areas and there will be no long-term maintenance right-of-way corridor through wetlands.

Although no impacts on threatened and endangered species have been identified, there are potential habitat areas for threatened and endangered species within existing right-of-way corridors. Two new short (about 200' by 30') corridor areas are within spotted owl management areas, but the corridor is not anticipated to affect the nest sites due to its distance from the nest areas. The pipeline corridor will be located on existing logging or forest roads to the extent feasible.

- C **No Impact on Rare Plants:** Field surveys of potential habitat completed in the 1996, and 1997 spring and summer seasons, and spring of 1998 has confirmed that no rare plants will be impacted by the proposed route.
- C **Impacts on Fisheries Minimized:** Impacts on fish species will be minimized by ensuring stream flow is maintained, erosion/sedimentation is controlled to the extent feasible, and construction is timed in order to have the least impact.
- C **Erosion and Sediment Control:** Construction contractors will implement an erosion and sediment control plan to include Best Management Practices. These plans and practices will minimize or eliminate potential impacts such as water quality degradation through sedimentation, erosion, and removal of vegetation, and effects on fisheries and aquatic resources.
- C **Wetlands Restored; Short-term Impacts:** Through careful route selection, potential impacts on wetlands have been minimized. In cases where the pipeline route disturbs a wetland, the disturbance will be temporary, and minimized by ensuring that the pipeline crosses the narrowest portion of the wetland. In addition, protective mats will be used during construction to protect surrounding vegetation.

Following completion of construction, temporary disturbances to wetlands will be remedied by returning the areas to previous conditions to avoid the potential for non-indigenous, invasive plants to thrive, and affecting vegetation growth through compacting of the soil.

- C **Little or No Long-term Noise Impacts:** Temporary increases in noise will result from construction of the pipeline. However, most construction will be limited to daytime hours and most areas will experience no more than two weeks of construction activity at any

given time.

Noise from operation of the pipeline will be minor. The equipment at the Thrasher, North Bend and Stampede pump stations will be enclosed in buildings to minimize noise. The Kittitas Terminal is adjacent to I-90, where noise levels are already high due to traffic. There are gasoline service stations in the immediate vicinity, but no residences.

- C **Fire, Explosion Risk Minimal:** There will be few combustible construction materials on site during construction. A minor risk of fire or explosion will exist from refueling vehicles on site. Welding equipment for pipeline construction will be limited to electrical arc welding. Some acetylene welding equipment may be used in construction of the Kittitas Terminal. Most construction vehicles will carry fire extinguishers and water tanker trucks operating on the right-of-way will respond to any fires.

There is minimal risk of fire or explosions from the operation of a petroleum products pipeline. Leaks or spills rarely result in fires or explosions. At the Kittitas Terminal, OPL will install the best available fire suppression technology, including foam fire suppression systems for each tank and foam jets and outlets at strategic locations throughout the terminal.

- C **Minor Land Use Impacts:** There will be minor land use impacts during construction, although construction will be timed to the extent feasible to minimize impacts on agricultural lands. As to the operation, the Kittitas Facility has been located adjacent to I-90 where land use is currently changing from agriculture to commercial and industrial. The Thrasher Station has been located in an area of intersecting transmission lines. The North Bend Pump Station will be located in an area that is currently vacant.

- C **Housing and Service Impacts Temporary and Minimal:** Construction of the pipeline will be performed in three "spreads," or sections of concentrated work activity. There will be two large spreads and one smaller one. The two larger ones, with approximately 375 workers each, will begin at the west and east ends of the pipeline route. The third spread, employing approximately 160 workers, will work in the Snoqualmie Pass area where the corridor is narrow.

By working in spreads, the work crews are distributed over a wide area, resulting in minimal impacts on housing and public services in any given area. The work is short in duration and few, if any, out-of-area workers are expected to be accompanied by families.

There will be a short-term beneficial impact on local businesses, including grocery stores and restaurants, during the time workers are located near communities.

- C **No Light or Glare from Pipeline; Perimeter Lighting Only for Pump Stations:** During operation, an underground pipeline produces no light or glare. Most construction activities will occur during daylight hours. There may be a periodic need to perform some equipment repair and clean-up during night hours, which will require the use of lights. Such repair areas will be located away from residences whenever possible. Contractor construction yards will have lighting directed into the yard to minimize impacts beyond the site.

Pump stations will be lighted during night hours for security, but lights will face inward from the perimeter. Light and glare impacts from the Kittitas Terminal are expected to be minimal. The terminal will be lit along the perimeter and in the interior for night operations. There are no residences in the vicinity of the terminal.

- C **Minimal Visual Impacts:** Because the pipeline will be underground, there will be few visual impacts. The pipeline will only be visible in the few locations where it crosses bridges above-ground. There are three locations where travelers will notice some removal of trees or other vegetation as a result of the pipeline: near Tinkham Road (Snoqualmie Pass), at the Yakima River, and adjacent to I-90 east of Kittitas. However, these are impacts common to areas where other right-of-way corridors are located.

- C **Short-term Interruption of Trail Use; No Long-term Adverse Impact on Trails or Recreation Areas:** The pipeline will be located beneath approximately 28 miles of existing recreational trails. Trails will be fully restored following construction and no significant impact will result. There will be some interruption of trail use during construction.

Recreational facilities affected by construction are Cedar Falls Trail and Iron Horse State Park (John Wayne Trail).

- C **No Direct Impacts on Public Utilities:** No extensive demand on public services or utilities is expected, during construction or operation of the pipeline and ancillary facilities. During project planning, the location of all buried water lines and irrigation pipes will be identified. Construction activities will be planned to avoid damage to existing lines and facilities.

Once the pipeline is built, it will be located in clearly marked right-of-way. The pump stations and block valves will be fenced and gates locked to prevent access. An alarm system will provide additional security. The Kittitas Terminal will have a full-time security system and its own fire detection and suppression system and support. This will

minimize demands on local emergency service providers.

SUMMARY OF ALTERNATIVES CONSIDERED

Six alternative cross-state routes for the pipeline were considered. The proposed corridor was selected based on environmental considerations, less difficult construction, and fewer impacts on communities.

Stevens Pass: For this route, the point of origin would be in Skagit County where OPL's two lines from the refineries first begin to run parallel to one another. A third line would be constructed and run parallel to the two lines to a point south of Everett. There, the route would follow Highway 2 over Stevens Pass to Wenatchee, crossing the Columbia below Rocky Reach Dam, and terminating at Moses Lake. The existing pipeline from Spokane to Moses Lake would have to be reversed or a parallel line constructed in order to make deliveries to Spokane.

The Allen Station via Stevens Pass to Pasco Corridor Alternative would be 45 to 60 miles longer than other corridors and would therefore cost a minimum of between \$20 and \$28 million more to build than other corridors. This corridor and the Snohomish Alternative would both go over Stevens Pass. Stevens Pass is much more rugged, with more steep slopes and more rock outcroppings than Snoqualmie Pass. These factors add to the construction difficulty, and will significantly increase construction costs and the time required for construction in mountainous areas. Both corridors would also require going through 7 cities with construction impacts to both residents and motorists on Highway 2. For these reasons, both the Allen Station and Snohomish Alternatives have been eliminated from further consideration.

Snoqualmie Pass:

Three alternatives using Snoqualmie Pass have been considered. One corridor, using the Centennial Trail would be approximately 20 miles longer than the other two at an approximate increase of \$10 million in construction costs. The Hollywood Alternative, originating near Hollywood and State Route 202, following the Tolt River water pipeline east, and connected with the Bonneville Power Administration right-of-way east of Duvall would require two additional pump stations, at a construction cost of approximately \$4 million over the Thrashers Corner Alternative. Pipeline access would range from easy to moderate for all three alternatives. All three would have the same number of river crossings. A preliminary review of wetland impacts for the three alternatives has shown that the alternative using the abandoned railroad line along the Centennial Trail would create the unavoidable impact of filling high quality wetlands. High quality wetlands can be avoided on the other two Snoqualmie Pass alternatives. The railroad alternative also would impact a greater number of cities than the other two Snoqualmie Pass Alternatives. Due to the need to add fill to widen the Centennial Trail corridor, the resulting unavoidable impacts to wetlands, and the greater number of cities that would be affected during construction, the railroad alternative has been eliminated from further consideration.

Of the two remaining Snoqualmie Pass alternatives, the Hollywood Alternative would place the proposed pipeline in the City of Seattle Tolt River Water Pipeline corridor. The City has initiated plans to add a second water pipeline within this corridor, and there would not be room for two water pipelines plus the refined petroleum products pipeline. Because this corridor would now require the clearing of new right-of-way it has been eliminated from further consideration.

Stampede Pass: For this route, the point of origin would be Renton. The route would head northeast to Maple Valley and parallel Highway 169, crossing Highway 18 at Hobart. There, the route would follow existing power line right-of-way and Burlington Northern's Stampede Pass rail line over the Cascades Mountains. Stampede Pass was judged to be less constructable than Snoqualmie Pass Alternatives, the pipeline access would be more remote than Snoqualmie Pass alternatives, and it was viewed as unlikely that permission would be granted by the City of Seattle to construct within the Cedar River watershed. For these reasons, this alternative has been eliminated from further consideration.

Yakima: The point of origin for this route alternative would have been the same as the Snoqualmie Pass or Stampede Pass alternative until reaching Ellensburg. East of Ellensburg, this alternative would turn south and follow the Yakima River and Highway 821 to Yakima. Near Yakima, the route would turn east and follow power line corridors that parallel Highway 24, then turn south near the Yakima and Benton County boundary. Seven miles north of Grandview, this route would turn east to Pasco, crossing the Columbia north of Richland, or turn south and cross near the I-182 bridge.

The Yakima Valley subcorridor could be used with any of the three mountain pass crossings. The environmental impacts have been judged to be greater than the Thrashers Corner alternative because it would require crossing the Yakima River a minimum of six times as compared to one crossing for the Thrashers Corner alternative. The increase in crossings would increase construction costs by approximately \$5 million (river crossing costs are estimated at \$1 million per crossing). The corridor would also cross through vineyards, orchards and crops such as asparagus. The Thrashers Corner alternative would cross through primarily grazing land and would skirt around irrigated fields. The Yakima Valley subcorridor was judged to have a greater impact on land uses for this reason. The purchase of right-of-way easements from property owners was also estimated to be greater due to the impacts to vineyards, crop lands, and orchards. The construction impacts to these areas would take longer to recover as compared to brief impacts to open grazing land. For these reasons, the Yakima Valley subcorridor has been eliminated from further consideration.

The remaining alternative, Thrashers Corner via Snoqualmie Pass to Pasco, has been found to be constructable and accessible. The alternative makes extensive use of existing utility or road corridors to minimize the need to clear new right-of-way. The corridor avoids crossing through major populated areas, and crosses through two cities within an existing trail.

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